

Customer No.: 31561
Application No.: 10/691,617
Docket No.: 17956-US-PA

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed April 21, 2006. Applicants submit that claim 1 has been amended hereby; claim 21 is newly added; the other claims remain unchanged as previously presented. Applicants also submit that the change to claim 1 is mostly addressing to comply with the requirements set forth in 35 U.S.C. 112, second paragraph only, while most of the subject matter in the amended claim 1 had already been presented and examined previously. Applicants submit it has been disclosed in the specification (paragraph [0032]), that the basement 411 and the shielding 412 form an airtight space", thus claim 1, as currently amended, is fully supported by the previously filed claims and the specification. Support for the new claim 21 can be found in the specification and the drawings, specifically paragraphs [0031]-[0034] and FIG. 4. Reconsideration and allowance of the application and presently pending claims 1, 4, 5, 9, 10 and new claim 21 are respectfully requested.

Claims Rejections under 35 USC §112

Claims 1, 4, 5, 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

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In response to the rejection to claims 1, 4, 5, 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, Applicants have amended claim 1 and submit that claims 1, 4, 5, 9 and 10 are now in allowable form under 35 U.S.C. 112, second paragraph.

Claims Rejections under 35 USC §103

Claim 1, 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in the specification of the present application in view of the collective teachings of Brosig et al. (US5106441), Hashizume et al. (US2006/0027318), Lee et al. (US 7022199) and Lee et al. (US 2003/0178133).

In response to the rejection to claim 1, 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a), Applicant has amended claim 1, and hereby otherwise traverses this rejection. As such, Applicant submits that claims 1, 4, 5, 9, and 10 are novel and unobvious over the Admitted Prior Art, Brosig et al '441, Hashizume et al '318, Lee et al. '199, Lee et al '133, or any of the other cited references, taken alone or in combination.

Applicants note that Hashizume et al '318 has a US filing date of Oct. 12, 2005, that is later than the US filing date of the present invention which is Oct. 24, 2003. Therefore, Applicants submit that Hashizume et al '318 is not eligible as a prior art reference of the current

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application. Applicants submit that Hashizume et al '318 should be withdrawn from consideration and any rejections relying thereon should also be withdrawn.

With respect to claim 1, as amended, recites in part: A flat-panel display (FPD) ... comprising:

a chamber having an airtight space, the chamber comprising:
a housing received in the airtight space;
... the curing device and the housing form an operating space; and
a vacuum device, adapted for decreasing the pressure of the operating space down to lower than 1 atmosphere; and
... (Emphasis added)

Applicant submits that such a flat-panel display encapsulation apparatus as set forth in claim 1 is neither taught, disclosed, nor suggested by the Admitted Prior Art, Brogsig et al '441, Hashizume et al '318, Lee et al. '199, Lee et al '133, or any of the other cited references, taken alone or in combination.

The Admitted Prior Art teaches "[T]he chamber 21 has an airtight space, which is filled with inert gas to decrease moisture and oxygen" (Paragraph [0004], FIG. 2A). The Examiner contended that item 21 (chamber) reads on the housing as required in claim 1 (See page 3 of the

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current Office Action). However, Applicants submit that the chamber 21 that is also interpreted as reading on the housing by the Examiner could not also be **received in an airtight space of itself** (the chamber 21) (Emphasis added). Therefore, Applicants submit that the Admitted Prior Art fails to teach, suggest or disclose “a housing received in the airtight space”, that is required for claim 1, as currently amended.

Further, Applicants note that the Examiner stated that “[I]t is unclear as to whether the Admitted Prior Art teaches the chamber comprising a vacuum device adapted for decreasing the pressure of the operating space down to lower than 1 atmosphere” (last sentence of page 3 of the current Office Action”. Applicants respectfully disagree. As contended following the description of the Admitted Prior Art, several disadvantages of the Admitted Prior Art are illustrated (See paragraphs [0011] to [0013]). In paragraph [0011], a disadvantage of the Admitted Prior Art is illustrated as “when performing high temperature test, the residual gas in the space will be heated and expand ... the pressure of the space becomes larger, which destroys the encapsulated structure of the glass substrate 31, adhesive 32, and electroluminescent substrate 33”. And thereafter, it is concluded that “it is an important subjective of the invention to provide an FPD encapsulation apparatus and encapsulating method to control the pressure of the space between the glass substrate 31, adhesive 32, and electroluminescent substrate 33 ...” (paragraph [0014]). Applicants submit that it is clear from the above cited sentences, that the present invention as set forth in claim 1 is subjected to provide an FPD encapsulation apparatus to control the pressure of the operating space that is a disadvantage of the Admitted Prior Art, since

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if the Admitted Prior Art has a vacuum device adapted for decreasing the pressure of the operating space down to lower than 1 atmosphere, the very disadvantage would not exist.

Furthermore, Applicants submit that Brosig et al. '441, Lee et al. '199, and Lee et al. '133 fail to teach, disclose, or suggest to modify any apparatus as shown in the Admitted Prior Art by adding a vacuum device. Please note as set forth in claim 1, the housing is received in the airtight space, and the curing device and the housing forms an operating space, so that the operating space is inherently within the airtight space.

Brosig et al. '441 teaches "[T]he vacuum device can be designed in such a manner that it is initially open ... [T]he holding devices retaining the liquid crystal plates are then operated ... [T]he vessel is closed, operations are performed and finally the entire vessel is ventilated ... [I]t can also be designed so that the actual working space is continuously evacuated and the upper and lower holding devices retaining one liquid plated each are introduced via air locks" (Column 3, lines 3-10; FIG. 1). Applicants submit that Brosig et al. '441 teaches a holding device 12 operated in a vacuum device 11. The operations of the holding device 12 and the vacuum device 11 are performed separately in fact. If anything, Brosig et al. '441 teach providing a vacuum device (vacuum space) outside the holding device (housing). Therefore, Brosig et al. '441 teach away from the proposed modification to include a vacuum device for providing a pressure lower than 1 atmosphere to the operating space within the chamber (holding device).

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Similarly, neither Lee et al. '199, nor Lee et al. '133 has taught, disclosed, or suggested that a vacuum device is provided for forming a vacuumed operating space within an airtight space.

Applicants recognize it is desired in the art to provide an operating space having a pressure lower than 1 atmosphere for manufacturing LCD device therein. However, none of the Admitted Prior Art, Brosig et al. '441, Lee et al. '199, Lee et al. '133 has taught, suggested, disclosed the apparatus as set forth in claim 1. Applicants submit that there is no teaching or suggestion to modify the Admitted Prior Art with any of the cited references to include a vacuum device therein.

Accordingly, Applicant submits that claim 1, as currently amended, and its dependent claims 4, 5, 9, and 10 are not rendered obvious by the Admitted Prior Art, Brogsig et al '441, Hashizume et al '318, Lee et al. '199, Lee et al '133, or any of the other cited references, taken alone or in combination, and thus should be allowed.

New claim

Claim 21 is newly added.

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Applicants submit that claim 21 is novel and unobvious over the Admitted Prior Art, Brogsig et al '441, Hashizume et al '318, Lee et al. '199, Lee et al '133, or any of the other cited references, taken alone or in combination, and thus should be allowed.


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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1 4, 5, 9, and 10 and new claim 21 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,


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